



Harford County
Recycling Review
January to December 2002

This document is available in alternative format upon request
Preserving our values ~ protecting our future

X. ATTACHMENTS

- I. Confirmation letter from Maryland Department of the Environment dated July 18, 2002.
- II. Letter and collection numbers from Maryland Department of Agriculture dated October 15, 2002.
- III. Administrative Policy Number 1500-01, dated November 1, 1991.
- IV. *Home Composting, Grasscycling Guide, Enjoy the Convenience of Curbside Recycling, Precycling – Easy Ways to Lose Those Pounds and Reduce That Waste, Textile Recycling – Recycling’s New Wrinkle, and Brushing Up On Paint Recycling & Disposal* brochures

I. Background

A. Legislative Background

In 1988, Governor William Donald Schafer signed into law legislation requiring Maryland counties to develop a plan to reduce the solid waste stream by 20 percent through recycling. The Maryland Recycling Act (MRA) was an unfunded mandate to address the State's dwindling landfill capacity and its need for a comprehensive recycling strategy.

Each Maryland county was to: have a plan approved by the State by January 1, 1992; report annually to the State; and show that it had attained the goal of 20 percent by January 1, 1994. Each report to the State must include: information on the total amount of solid waste disposed and the amounts and types of solid waste recycled; methods of waste reduction other than recycling; and the waste reduction percentage actually achieved. The MRA and subsequent guidelines distinguished those waste streams "eligible" for this account and those that were not "eligible." Construction and demolition debris, for example, is not an eligible waste stream for this accounting.

B. Development of Plan

1. Development of Plan

Harford County took an approach toward minimizing both cost and changes to the existing collection system currently servicing the County. A bag-based collection system was chosen. Bags (rather than bins) would eliminate the need for trash haulers or the County to invest in specialized equipment. The use of bags was also seen as a means to enhance materials recovery due to their convenience. The bag-based system also provides the means to maintain a flexible system, easily modified as conditions or markets may warrant.

2. Implementation of the Plan

Harford County Department of Public Works, Division of Environmental Affairs, Bureau of Solid Waste Management, Office of Recycling is responsible for the implementation of county-wide programs to recycle materials that, if not recycled, would be included in the County's solid waste stream. This portion of the County's waste comes from households, as well as institutional, commercial and light industrial sources. Recycling is one management method of these discards and an important part of the total solid waste management system. Solid

waste must be managed for the protection of public health and the environment.

3. Market Development

Market Development in recycling is a complex process that calls for the careful integration of government, the public, and private industry across a well-developed set of policies and programs. Market development depends upon a reliable, high-volume, high-quality stream of secondary raw materials and can only succeed if consumers purchase the finished goods that have recycled content, closing the loop.

A classic example of closing the recycling loop, as written by Clifton Dowling and reprinted with permission from the Northeast Maryland Waste Disposal Authority, reports on the Clorox Products Manufacturing Company in Perryman. We can follow the recycling trail of the plastic in a common one-gallon milk jug to illustrate that point. If you look on the bottom of a plastic milk jug you will find a recycling symbol, three arrows following each other in a circle surrounding the number two. The "2" stands for high-density polyethylene, a plastic commonly abbreviated as HDPE.

Let's start with a one-gallon milk jug purchased by a consumer in Harford County. After drinking the milk, the consumer places the jug in a blue plastic bag and places the bag on the curb for recycling. A trash hauler picks up the bag on recycling day. The hauler takes the blue bag, along with hundreds of others, to the transfer station at the Harford Waste Disposal Center (HWDC). Thousands of blue bags are consolidated at the transfer station into a 100-cubic yard trailer, which is hauled to a materials recovery facility (MRF) in Baltimore County.

The blue bags are unloaded at the MRF, where the contents are removed and separated. The separated materials are then baled and sold to recycling processors. Our HDPE jug is sold to a plastics recycler in the area.

Employees at the plastics recycler wash the plastic jugs and grind them into pellets, which are sold to the Clorox Products Manufacturing Company in Perryman. Clorox purchases more than five million pounds of recycled pellets every year. The recycled HDPE is made into the inner lining of Clorox's famous white bleach bottle. The bottles are filled with bleach. Some of them end up on store shelves in Harford County and other counties around the State. When a consumer

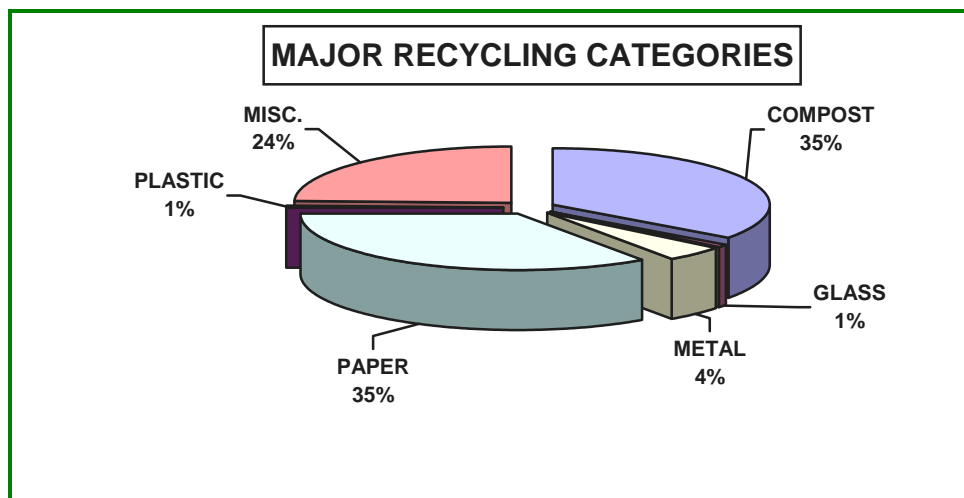
purchases a bottle with recycled HDPE content, the recycling loop is closed!

Once the HDPE bleach bottle is empty, it can be placed in a blue bag at the curb to begin the journey through the recycling loop again.

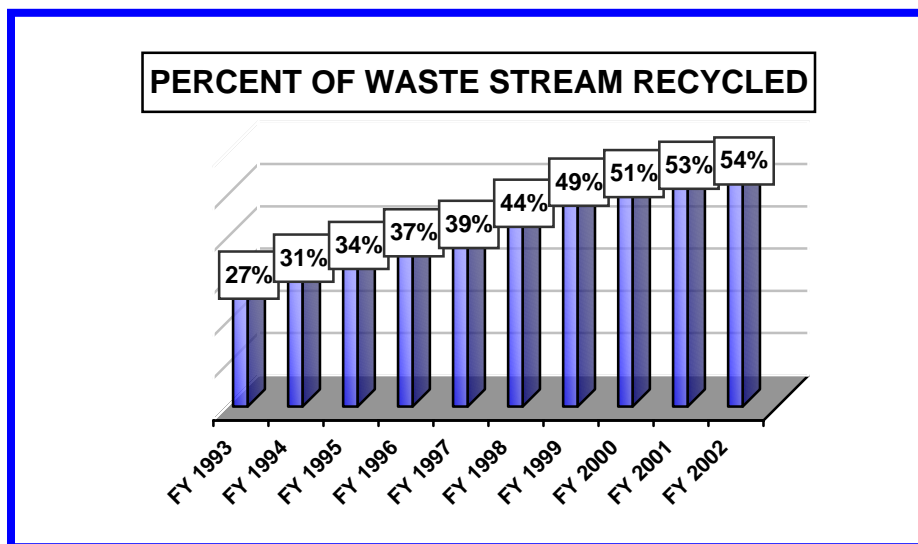
In 1998 and 1999, Harford County, Baltimore County, Montgomery County and the Maryland Environmental Services were selected jointly as recipients of the National Recycling Coalition, Inc. award for the best market development programs.

II. Current Status

Harford County celebrated ten years of curbside recycling with a recycling rate of 54 percent (50 percent recycling plus four percent source reduction credit). Harford County's citizens are pitching in and continuing to increase that percentage.



Recently released figures from the Maryland Department of the Environment (MDE), indicate Harford County sent 139,179 tons of recyclables to market. That translates to 50 percent of the county's waste stream being diverted, which directly impacts landfill space. A confirmation letter dated July 18, 2002 from MDE is presented as Attachment I.



III. Waste Reduction

Waste reduction, or source reduction, activities focus on preventing the generation of solid waste, generally by decreasing the volume of materials produced and consumed. Very simply, waste that is not generated will not enter the waste stream. The Office of Recycling continues education and outreach programs in waste reduction through advertising, brochures, and presentations.

MDE has developed a uniform report to be submitted annually and reviewed earning counties, strong in education on waste reduction, up to an additional five percent credit that can be added to the overall recycling rate.

As set forth in the Harford County Recycling Plan, adopted by the County Council on February 4, 1992, and approved by the State of Maryland on June 1, 1992, the public must understand the reasons their participation is important. Public education and outreach that goes beyond the specifics of how and why to recycle will contribute to new purchasing practices and reduced waste generation. This effort will also better serve the public and the environment, and not simply enhance the numerical goal of the Plan.

IV. Awards

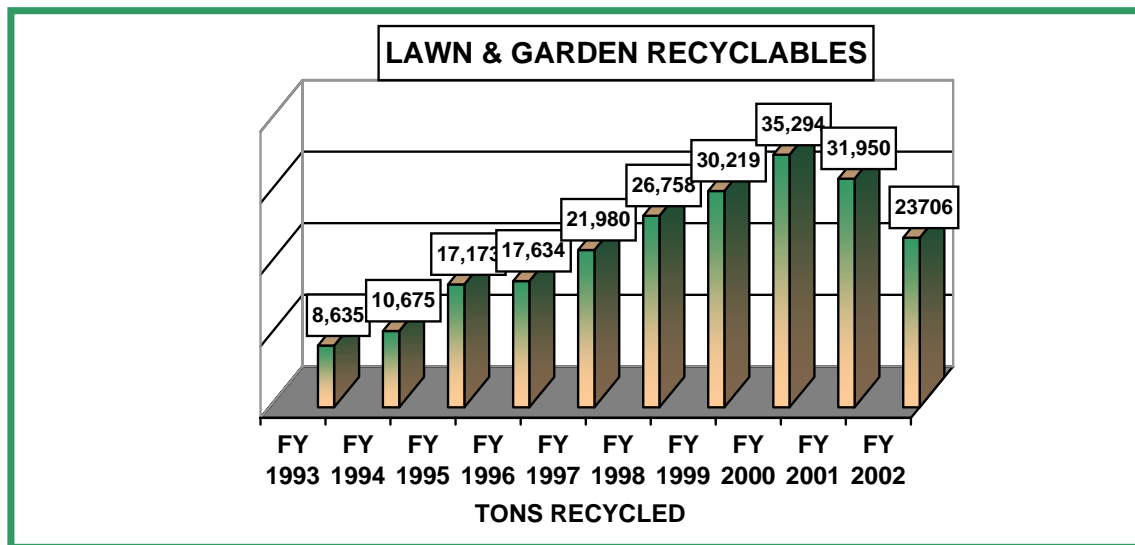
In celebration of America Recycles Day, November 15, the Office of Recycling recognized and awarded an elementary school teacher, a high school teacher and two businesses, EDSI and Frito Lay of Aberdeen with the 2nd annual Excellence in Recycling Awards. The

ceremony was held at the Liriodendron Mansion. The recipients received plaques, certificates, and miscellaneous items primarily made from recycled materials.

V. Recycling Programs

1. Lawn and Garden Recyclables (Yard Trimmings)

Lawn and Garden Recyclables (Yard Trimmings) are defined as leaves, grass clippings and woody wastes (branches, trimmings, stalks, Christmas trees, and roots) found in the municipal solid waste stream. The EPA estimates that yard trimmings constitute approximately 18 percent of the national municipal solid waste flow. Recovery of yard trimmings by processing into compost and/or mulch is an intricate component of Harford County's integrated solid waste management program.



In 1992, Harford County imposed a ban on the landfilling or incineration of yard trimmings from residential and commercial generators. The ban prohibits yard trimmings from being collected with trash. As a result, separate yard trimmings collection by the private haulers is necessary. Where collection by a private hauler is unavailable or too expensive, drop-off sites have been set up in Fallston, Bel Air, Abingdon, Churchville and the HWDC for the convenience of county residents.

The HWDC has a nine-acre paved Composting Facility that processes an average 630 tons of materials weekly or 32,760 a year. Processing

yard trimmings into compost and/or mulch involves two different technologies: composting and mulching.

Composting is the biological decomposition of organic materials under aerobic conditions to a level of stability suitable for its intended use.

Woody yard waste can be recycled into mulch, compost, or a combination of the two. Because of the high carbon content, woody wastes are slow to decompose. Generally this waste is not considered suitable for large-scale composting and is more commonly processed as mulch.

Through State approved mulching and composting processing, mulch and compost are made available to Harford County residents. Residents may load three 30-gallon bags or cans of nutrient-rich mulch or compost at the HWDC free of charge whenever it is available. Larger quantities can be obtained for a small fee. Coupons may be purchased for 1-cubic-yard quantities of mulch or compost (\$10). The coupons must be used before year's end and are non-refundable. Coupons may be purchased at Revenue Collections, 220 South Main Street, Bel Air or at the HWDC. Coupon holders may go directly to the Composting Facility and bypass the landfill's main entrance.

2. Backyard Composting

Backyard Composting is the most practical and convenient way for homeowners to handle lawn and garden materials. It is easier and cheaper than bagging and transporting these materials to a drop-off site.

The Office of Recycling has conducted backyard-composting workshops in cooperation with the Master Gardeners and the Cooperative Extension Office. Brochures and a video are available to the public.

3. GrassCycling

GrassCycling is a term coined by the Professional Lawn Care Association of America to describe the natural process of recycling grass clippings rather than collecting and bagging them for disposal. According to university research, grass clippings consist of 80 percent water. Leaving grass clippings on the lawn when mowing returns the remaining 20 percent nitrogen content to the soil. The nitrogen fertilizes the root system for healthier, more prosperous grass plants.

Educational campaigns in April by the Office of Recycling coincide with National Lawn Care Month and include advertising, brochures and workshops that educate the public on the many benefits of grassCycling.

4. Christmas Tree Recycling

Christmas Tree Recycling turned 14-years-old in 2002. Since the ban on landfilling or incinerating yard trimmings in, June 1992, a yearly average of 25,000 Christmas trees have been turned in for recycling.

Christmas trees are accepted at five locations around the County, including the Composting Facility at the HWDC. The trees are ground into mulch and, after proper maturing, made available to Harford County residents.

5. Scrap Metal Recycling

Scrap Metal Recycling dates to the earliest days of iron making. Scrap use began in North America in 1642 when the first iron furnace was built in Massachusetts. During the American Revolution, iron kettles and pots were melted down for weapons making. During the Civil War, citizens were urged to donate old metal objects. Wartime scrap drives continued through the Korean War.

In the late nineteenth century, the demand for scrap increased as the steel makers began melting scrap in open-hearth furnaces. Demand for scrap in steel production was further boosted in the 1900s as the electric furnace, which could use 100 percent scrap as its raw material, became popular in steel making.

Scrap metal should be included in any recycling program. Ferrous metals are magnetic and, therefore, easily removed from the waste stream.

Harford County has operated a scrap metal recycling program for fourteen years, collecting and marketing more than 26,000 tons of metal. Containing significant amounts of steel are large appliances such as refrigerators, freezers, washers, dryers, water heaters, stoves, and furnaces. Items containing at least 80 percent metal (bicycles, lawn mowers, barbecue grills, etc.) are also accepted. County residents may deliver scrap metal goods to the HWDC free of charge.

6. Litter Control and Adopt-a-Road

Litter Control and Adopt-a-Road programs are administered through the HWDC.

The Adopt-a-Road program is fashioned after the State's program enlisting volunteers to adopt 1- to 2-mile sections of the County's roads and to pick up litter and recyclables approximately four times a year. Currently, 201.8 road miles are adopted with a waiting list for other County roads. 258,511 pounds of solid waste have been collected last year, of which 84,981 pounds were recyclables.

Litter Control personnel work for the HWDC to pick up litter and recyclables throughout the County.

7. Household Hazardous Waste

Household Hazardous Wastes are those wastes resulting from products purchased by the public for household use which, because of their quantity, concentration, physical, chemical or infectious characteristics may pose a hazard to human health or the environment when improperly disposed.

The following household hazardous wastes are collected on an ongoing basis:

- a) **Lead-Acid Batteries.** The largest component of batteries by weight is discarded automobile batteries. The traditional lead-acid battery can pose an environmental threat due to its lead content when disposed with municipal solid waste. Lead-acid batteries are accepted for recycling at two locations in Harford County: the HWDC and Susquehannock Environmental Center. Additionally, most automotive retailers will accept old batteries for recycling.
- b) **Motor Oil and Antifreeze.** Used motor oil and antifreeze are accepted at twelve locations throughout the County including the HWDC. Harford County ranks second among the state's jurisdictions for the collection of antifreeze and motor oil.
- c) **Latex Paint.** As the largest component of most household hazardous waste streams, latex paint is a major target for recycling. Potential benefits include cost savings, material recovery, and diversion from Landfill disposal. Latex (water-based) paint recycling is a common practice. Over the past nine

- years, the Office of Recycling has conducted Latex Paint Recycling collection events twice yearly (Spring and Fall) diverting more than 8,100 gallons of latex paint from the waste stream. In 2002 the Office of Recycling employed personnel from the Arc following the event for the sorting, opening and mixing of the dropped off latex paint.
- d) **Empty Pesticide Containers.** In cooperation with the Maryland Department of Agriculture (MDA), the Office of Recycling offers the farming community an environmentally sound method of recycling/disposing of pesticide containers. The program offers one drop-off date per month from June to September. Representatives from MDA inspect the containers to verify the triple-rinse cleansing method. Over this eight-year program, more than 13,300 containers have been accepted for recycling. In 2002, 875 containers were accepted. Attached and presented as Attachment II is the report from the MDA dated October 15, 2002.
 - e) **Gasoline/Oil Mixture.** In response to many inquiries from County residents regarding the proper disposal of gasoline/oil mixtures used primarily in outboard motors and lawn equipment, a program has been developed by which residents may call the HWDC and make arrangements to bring the mixture to a specific location at the Landfill. Once full, the collection tanks are emptied and the old gasoline/oil is recycled.
 - f) **Electronics Recycling.** During 2002, three one-day Recycling events took place throughout the County. In those three events, nearly 50 tons of old televisions and computers were dropped off for recycling. Televisions and computer are a rapidly growing part of the waste stream. It is estimated that by 2004, 315 million personal computers will become obsolete.

In November 2002, the Office of Recycling and the County's Local Emergency Planning Committee sponsored the first household hazardous waste collection day at the HWDC. 4,000 pounds of residential hazardous waste was collected on that day.

8. Textiles

Textile Recycling, which includes clean and dry clothing, hats, drapes, curtains, belts, handbags, towels, sheets, blankets, and paired shoes, became a permanent program at the HWDC after its debut in 2000. Textile recycling provides clothing for less fortunate individuals or the items are made into industrial shop rags. Items that are excluded are wet textiles, carpets, pillows, or any plastic materials

other than the plastic collection bags. A trailer provided by Dumont of Philadelphia is in place at the HWDC to accept clothing and textile items.

VI. Buy Recycled

Successful recycling is a full-circle, three-step process. It begins with **collection** and separation of recyclable materials. The materials are then **remanufactured** into new products. Finally, the recycled products are **returned** to the marketplace as new consumer goods.

Recycling is a market-driven industry. If the demand exists for products made from recycled materials, manufacturers will make them. The marketplace potential for recycled goods is expanding. More products made from recycled material are available. Educating the consumer is important to overcome some image problems and to change the buying habits of consumers.

As a consumer group, government agencies represent a significant force. Their purchases amount to 20 percent of the Gross National Product. Additionally, government purchasing practices can have widespread influence on the private sector. Harford County Government remains committed to buying recycled and through its administrative policies can provide leadership by example and encourage private sector use of government standards and specifications. A copy of Administrative Policy Number 1500-01 is presented as Attachment III.

VII. Public Education and Outreach

Recycling represents an essential part of Harford County's waste management system. Recycling, along with waste reduction, landfilling, incineration, and composting, allows us to take maximum advantage of limited disposal capacity while reducing pollution and conserving natural resources and energy.

Prior to the curbside recycling program, Harford County generated more than 109,500 tons of municipal solid waste per year. That equates to nearly four pounds per person per day. Through extensive and ongoing public education and awareness, Harford County residents recognize the problems associated with municipal solid waste and are responding by separating many types of materials for recycling.

Of course, separating and collecting recyclable materials is just the beginning. Recycling is not complete until the materials have been reprocessed, marketed, and reused. Nonetheless, progress has been substantial in Harford County over the last 10 years as the comprehensive countywide recycling program continues to improve. As an example, in 1991, residents diverted five percent of the waste stream through recycling and composting. In calendar year 2002, 54 percent was diverted through recycling and composting.

While County Government, local industry and private organizations have all contributed to the increasing success of recycling and composting, the credit truly goes to the residents of Harford County who have embraced the recycling program. The evidence is not only in the increased recycling tonnages, but also evident in the changing of habits from throwaway items to reusable/recyclable items, and resistance to over-packaged products, and daily changes in attitudes and genuine concerns for the consequences of their actions.

In addition, Harford County public schools include recycling in their fourth grade science curriculum.

Through continued public education and outreach, adults and children will readily change wasteful consumption and purchasing habits. Several brochures have been published to address and clarify issues regarding the County's recycling programs. These brochures include: "Home Composting," "GrassCycling Guide," "Enjoy the Convenience of Curbside Recycling," "Precycling – Easy ways to lose those pounds and reduce that waste," "Textile Recycling – Recycling's New Wrinkle," and "Brushing Up On Paint Recycling & Disposal," and are presented as Attachment IV.

VIII. Commercial Recycling

The commercial waste stream accounts for a significant portion of the county's waste disposal. It is therefore imperative that commercial generators be educated about existing and planned recycling opportunities and the resulting benefits.

In 1998, the Environmental Protection Agency (EPA), Region III sponsored a Commercial Waste Diversion Program in Baltimore and Harford counties through a Solid Waste Management Assistance Grant. The Maryland Department of the Environment, Recycling Services Division, the Northeast Maryland Waste Disposal Authority, the Baltimore County Department of Public Works, Bureau of Solid Waste

Management, and the Harford County Department of Public Works, Division of Environmental Affairs partnered on the program to increase waste reduction and recycling of materials from commercial sources. The goal of the project was to divert commercially generated recyclable materials from disposal to recycling facilities.

The basic concept of the project was to observe loads of commercial waste as they were being tipped at the Waste To Energy Facility and attempt to identify companies that were disposing of significant quantities of recyclable materials. The companies identified were contacted and a site visit was requested. At the site visit, the company's current waste disposal practices were reviewed and suggestions were made on source reduction and recycling options that could improve the company's bottom line through lower disposal costs and income from the sale of recyclable materials.

The results of the program included: 2,584 loads of trash observed as they were tipped; 118 companies, institutions or government agencies identified as potential organizations to visit; and 40 companies were visited during the course of the project. Through the project, the county discovered an additional 5,000 tons of recyclable materials not previously reported to the State.

IX. Independent Initiatives

1. Susquehannock Environmental Center

Susquehannock Environmental Center, 700 North Tollgate Road in Bel Air, has been promoting environmental awareness in Harford County for more than 30 years. It remains the oldest, continuously operating recycling center in the United States.

Susquehannock is a nonprofit organization whose operation is overseen by a volunteer Board of Directors. Proceeds from memberships, donations, and the sale of recyclable materials cover operational expenses, and promotion of recycling, conservation and environmental education throughout Harford County.

The Center accepts all curbside items plus aluminum foil and aluminum scrap, lead-acid batteries, used motor oil and antifreeze, and will "buy back" aluminum on Fridays and Saturdays.

Yard trimmings containers are located on the grounds of the Center for the convenience of Harford County residents.

2. Aberdeen Proving Ground

Aberdeen Proving Ground currently contracts with a private trash hauler for the collection of trash and recyclables for their residents on Post. The recyclables collected are the same as those collected throughout the county.

3. Municipalities

The ***Town of Bel Air*** operates its own trash collection fleet. The Town is split into two districts with curbside recycling picked up on Thursdays and Fridays. Recyclables are delivered to the county's transfer station. Bel Air's recycling program mirrors the county's curbside guidelines.

The ***City of Aberdeen*** contracts with a private trash hauler to provide trash and recycling collection to its residents. Residents of Aberdeen are offered a financial incentive to recycle. Stickers must be purchased and attached to trash bags. Prices are based on the size of trash bag used. Recycling bins (provided by the City) do not require stickers.

The ***City of Havre de Grace*** contracts with a private trash hauler to provide trash and recycling collection to its residents. The city's recycling program follows the county's guidelines. Collection of bulk items and yard waste can be arranged through City Hall. Revenues received from residential water bills offset the cost of collection of recyclables.

4. Always Recycling and Green Marble Recycling

Always Recycling at 1353A Old Post Road, Havre de Grace buys back copper, brass, aluminum, stainless steel and aluminum cans.

Green Marble Recycling at 1646 Main Street in Cardiff buys back aluminum cans, aluminum scrap, copper, brass and stainless steel.